

REMARKS

The Office Action of **November 18, 2003**, has been received and its contents carefully noted. Applicants respectfully submit that this response is timely filed and fully responsive to the Office Action.

Claims 1-104 were pending the present application prior to the above amendment. By the above amendment, independent claims 1, 19, 36, 54, 71, 80, 88 and 97 and dependent claims 3, 20, 38, 55, 73, 81, 90, and 98 are amended to correct discovered informalities. No new matter is introduced. Accordingly, claims 1-104 remain pending in this application, of which claims 1, 19, 36, 54, 71, 80, 88, and 97 are independent, and which are believed to be in condition for allowance for at least the reasons stated below.

35 U.S.C. 103 Rejections

Claims 1-8, 19-25, 71-79, and 80-87 stand rejected under 35 U.S.C. §103(a) as unpatentable over *Lewis* (U.S. Patent No. 5,589,847) in view of *Suzuki* (U.S. Patent No. 4,571,584) and further in view of *Luder et al.* (U.S. Patent No. 5,642,117 – hereafter *Luder*); claims 36-43, 54-60, 88-96, and 97-104 stand rejected under 35 U.S.C. §103(a) as unpatentable over *Lewis* in view of *Suzuki* and further in view of *Akiyama et al.* (U.S. Patent No. 5,977,940 – hereafter *Akiyama*) and *Luder*; claims 9, 26, 44, and 61 stand rejected under 35 U.S.C. §103(a) as unpatentable over *Lewis*, *Suzuki*, *Akiyama* and *Luder* in view of *Friends et al.* (U.S. Patent No. 5,247,190 – hereafter *Friends*); and claims 10-18, 27-35, 45-53, and 62-70 stand rejected under 35 U.S.C. §103(a) as unpatentable over *Lewis*, *Suzuki*, *Akiyama* and *Luder* in view of *Matsueda et al.* (U.S. Patent No. 6,384,806 – hereafter *Matsueda*). Applicants respectfully contend that independent claims 1, 19, 36, 54, 71, 80, 88, and 97 and claims dependent therefrom, as amended, are clearly patentably distinct over the applied references, alone or in combination, for at least the reasons advanced below.

**The Applied References Alone or in Combination Fail to Teach or Suggest the Claimed
Invention**

Applicants respectfully contend that the applied references, alone or in combination, clearly fail to teach or suggest each and every element defined by the pending claims, as amended. For example, independent claims 1, 19, 36, 54, 71, 80, 88, and 97, as amended, recite "a multiple of m shift registers to which m -bit digital picture signals are inputted." By contrast, the applied references, taken alone or in combination, fail to teach or suggest the noted feature, as recited in independent claims 1, 19, 36, 54, 71, 80, 88, and 97.

Specifically, the present Office Action correctly admits, for example, at page 3, that *Lewis* does not disclose multiple shift registers being m or a multiple of m . The present Office Action further asserts that *Suzuki* discloses how to use multiple registers, citing Fig. 1, items 6A, 6B and 6C, and col. 3, lines 12-18. However, *Suzuki* merely discloses three shift registers (FIG. 1, items 6A, 6B and 6C) with inputted three-bit signal, as described at col. 3, lines 9-15, but fails to teach or suggest the noted features. Thus, although *Suzuki* may disclose m shift registers inputted with m -bit signal, *Suzuki* fails to teach or suggest employing "a multiple of m shift registers to which m -bit digital picture signals are inputted," as recited in independent claims 1, 19, 36, 54, 71, 80, 88, and 97.

The remaining applied references, *Luder*, *Akiyama*, *Friends*, and *Matsueda*, fail to cure the noted deficiencies in *Lewis* and *Suzuki*, as also clearly failing to teach or suggest a ramp type D/A converter circuit. Accordingly, the applied references, alone or in combination, clearly fail to teach or suggest that employing "a multiple of m shift registers to which m -bit digital picture signals are inputted," as recited in independent claims 1, 19, 36, 54, 71, 80, 88, and 97.

**The Dependent Claims are Allowable Over the Applied References Alone or in
Combination**

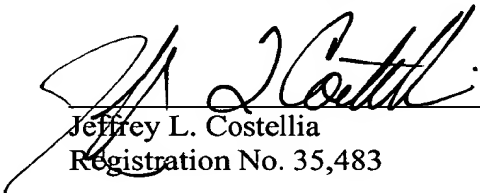
Dependent claim 2-18, 20-35, 37-53, 55-70, 72-79, 81-87, 89-96, and 98-104 are allowable over the applied references, alone or in combination, on their own merits and for at least the reasons discussed above with respect to independent claims 1, 19, 36, 54, 71, 80, 88, and 97.

Conclusion

Therefore, it is believed that independent claims 1, 19, 36, 54, 71, 80, 88, and 97 and claims dependent therefrom are clearly patentably distinct over the applied references, alone or in combination. In view of the foregoing remarks, reconsideration and withdrawal of the rejection is earnestly solicited.

Having responded to all rejections set forth in the outstanding final Office Action, it is submitted that the claims are now in condition for allowance. An early and favorable Notice of Allowance is respectfully solicited. In the event that the Examiner is of the opinion that a brief telephone or personal interview will facilitate allowance of one or more of the above claims, the Examiner is courteously requested to contact Applicants' undersigned representative.

Respectfully submitted,



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